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MEASURES TO REACTIVATE THE CONSTRUCTION AND REAL ESTATE SECTOR

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Resumen

Este trabajo examina y cuantifica el impacto de la crisis inmobiliaria en el sector de la construcción española, analizando la influencia de esa crisis para el grupo profesional de arquitectos que desarrollan su trabajo en la región de Madrid. El estudio incluye la planificación, diseño y distribución de una encuesta a dicho grupo, para evaluar las razones de la crisis de la vivienda, las medidas gubernamentales puestas en marcha, los efectos macroeconómicos y las medidas fiscales que han de tomarse en el sector, entre otros. Se concluye con una serie de propuestas y recomendaciones para la recuperación de este sector, que podrían acelerar la mejora en el escenario de crisis en que está inmerso.

Abstract

This paper examines and quantifies the impact of the real estate crisis in the Spanish construction sector, analyzing the influence that this crisis has meant for the professional group composed of technical architects who develop their work in the region of Madrid. The study includes planning, design and distribution of a survey to that professional group, in order to evaluate the reasons for the housing crisis, government policies put in place, macroeconomic effects and fiscal measures to be taken in the sector, among others. The study concludes with a set of proposals and recommendations for the recovery of the sector analyzed, which could accelerate the improvement of the severe crisis in which it is

currently involved.

Palabras clave: crisis inmobiliaria, sector de la construcción, aparejadores, políticas públicas, medidas fiscales.

Key words: real estate crisis, construction sector, technical architects, public policies, tax measures.

INTRODUCTION

The economic importance of the construction sector in the last decade, both in its contribution to Gross Domestic Product (GDP) and because of its multiplier effect it has on the rest of the branches of the economy has been remarkable (Bover, 2005, IMF, 2008). Much of Spanish economic growth in recent years is attributed to the contribution of the construction sector and, in concrete, to new buildings (Artola and Montesinos, 2006, Carpenter et al., 2008; Gill de Albornoz et al., 2010). Residential construction recently doubled its GDP weight from 4.7% in 1997 to 9.3% in 2007. The importance of this sector in the economy is not limited to its direct effects such as the contribution to output growth and employment generation, but also stimulates the activity of many other productive sectors suppliers of construction (Flanagan and Norman, 1993, Ministry of Development, 2000; Zhao, 2010), so that almost all of the purchases required by the sector are produced inside the Spanish territory.

In the case of Spain, this important role has been particularly prominent in the last expansionary phase that began in the late 90's, during which the construction sector served as the main protagonist and driving force of economic growth, both directly and indirectly (Monroy, 2008; SEE, 2006; Martínez Pagés et al., 2005; Gill de Albornoz et al., 2010). This was due to several factors, which may include the lowering of interest rates to historic lows after joining the Economic and Monetary Union (Martínez Pagés et al., 2003), the massive input of manpower from the immigration (Martinez et al., 2006), funding from the European Structural Funds and the easiness of credit to households by financial institutions (Casanovas and Bachs, 1998).

Thus, employment in the construction sector grew at an average annual rate of 6.7%, while total employment did so at a rate of 3.2%. Construction employment rose from 9.4%

of the total in 1995 to 14% in 2007 (SEE, 2008). However, recently, the construction has destroyed jobs in bulk, and has grown from 2,718 million direct jobs in the first quarter 2008 to 1,587 million jobs in the third quarter 2010, or 1,131 million jobs were destroyed (Uriel et al., 2009).

Consequently, it can not be denied today that during the decade 1997-2006 in Spain there was a real estate bubble (García Montalvo, 2007). The best proof is the bursting of that bubble that occurred in 2007 (SEE, 2007). During the decade before the economic downturn, the Spanish economy was based much of its expansion in the construction sector (Naredo, 1996), which grew from 1998 at rates exceeding 10%. Over-sizing of the sector, with a much higher weight on the economy than in other developed countries (Godfrey, 1996; Case et al., 2002), has been widely criticized. Experts agree that the residential housing market is primarily responsible for the over-sizing achieved by the construction sector (Ferruz et al., 2007; Uriel et al., 2009).

Some authors such as García Montalvo (2003) estimated, rightly, that we were facing a change with unpredictable consequences. In general, those critical positions stated that the dependence of the Spanish economy in the construction industry and especially in residential housing and excessive borrowing could lead to the economic recession, especially because of rising interest rates, eroding domestic consumption and increasing the unemployment and morosity rates, leading, ultimately, to a devaluation of real estate assets (Balmaseda et al., 2002).

All this, though there have been important demographic changes (Martinez et al., 2006) have generated a significant increase in household formation, and therefore an increase in "fundamental" demand of residential housing. In this situation, many experts agree that much of the expansive phenomenon observed has a speculative (Gill de Albornoz et al., 2010). Expectations in relation to increases in housing prices, helped by low interest rates and lower credit constraints, contributed to generate and sustain the "housing bubble" (García Montalvo, 2007).

In particular, the main symptom of this bubble was an abnormal increase in prices of real estate assets well above the CPI, caused, among others, by the following factors: lack of buildable land, tax benefits for houses purchases (Lobón Gavira, 2006), increased immigration, speculation, reclassification of land and the deficient funding by local

governments (SEE, 2007), which resulted in the 10% annual price increase on average, reaching sometimes up to about 30% annually (Ayuso, 2006; Informe Idealista, 2010).

In this respect, it can be said that there are three reasons why the real estate activity tends to generate intense cycles, even creating speculative bubbles with systemic effects on the rest of the economy (Gill de Albornoz et al., 2010). First, the supply in the sector appears in the short term. Thus, in a period when demand increases, supply reacts slowly, as the initiation and completion of new promotions that increase the existing housing stock take some time. This leads to rapid increases in prices (Gill de Albornoz et al., 2010).

Second, like any asset, housing is valued by the services provided over its life plus the expected appreciation. In periods of intense growth of house prices, expectations tend to be modified upwards, increasing investment in the asset. What is known as a real estate bubble occurs when expectations of growth become the main driver of rising prices (SEE, 2008).

Third, as house purchases requires a high investment, it tends to be leveraged, that is, external financing is needed for both the promotion and the purchase (García Montalvo, 2008). These three circumstances fueled an upswing wave in the housing markets.

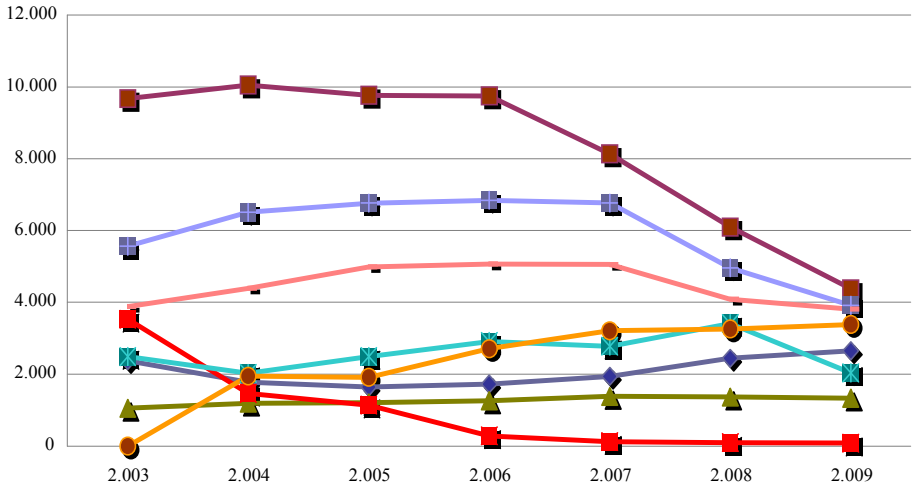
Moreover, since September 2007 there has been a decrease in housing prices in Spain, caused by the inability of the market to absorb the huge offer of housing built and empty available (Gill de Albornoz et al., 2010). This Spanish real estate cycle change has taken place for different external and internal factors: on the one hand, the lack of liquidity in the financial system (Cano Martínez, 2008; Varela Parache, 2008), caused by the sub-prime mortgage crisis in United States (Ontiveros, 2008), and on the other by the internal decay of the Spanish economy, high unemployment rate, lack of funding and the exhaustion of the growth model based on the construction (García Montalvo, 2008).

In addition, growth in construction activity will depend on whether the unemployment rate that occurred abruptly stabilizes and new jobs are created. Of course, the final effect will depend largely on the possibility that other activities emerge. But the forecasts do not foresee any production growth in this sector over the next three years and is expected to remain with decreases at least until 2013 (Ministerio de Vivienda, 2010).

This situation contrasts with that of all Europe, that faces another year of decline in construction, with a drop in production of 2.2% in 2010, but followed by two years of moderate recovery, with an expected growth of 1.6% in 2011 and 2.5% in 2012. Thus, taking 2007 as base year and calculating the evolution of four years, Spain will register a 50% drop in 2010, while in Europe the decline will be between 12% and 15%. The sector most affected by the crisis, both in Spain and throughout Europe, is the construction of housing, which in the domestic market has dropped 55% in 2009, decreased in addition to the 33% suffered in 2008. Regarding Europe, the production of housing fell 22.5% in 2009 compared to 2008. Thus, it is expected a paralysis of the Spanish residential housing production in the year 2010 and a weak recovery from 2011, always subject to the large housing stock and the current economic situation (Euroconstruct, 2009).

Finally, the following figures show the impact of the real estate crisis in the profession of "technical architect" in the sense that it can be seen how the professional work of the Technical Architect on Madrid region have evolved along the time. Thus, it is observed how the optional direction of projects and the safety coordination that are directly related to real estate, especially in the residential sector, remained at maximum from 2001 to 2006, while in 2007 a 19% reduction compared to previous years could be seen, and in 2009 the drop was 57%, continuing the trend of stagnation in the sector since 2007.

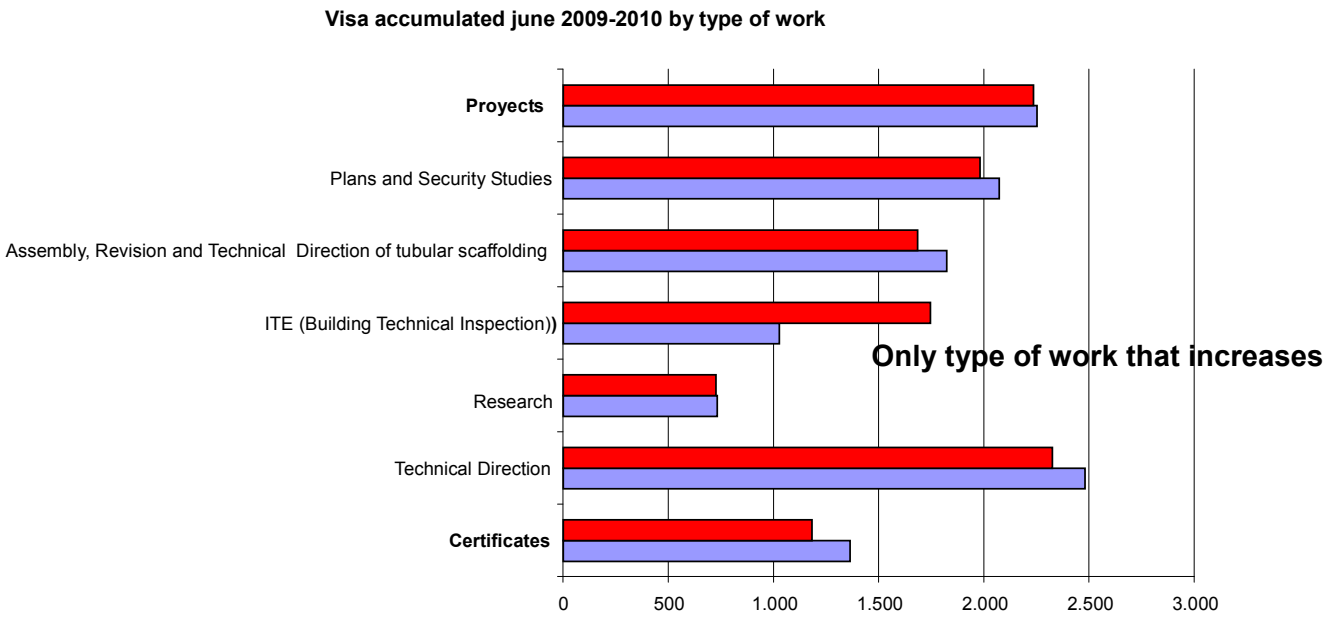
FIGURE 1. Madrid “technical architect” profession evolution (I)



	2.003	2.004	2.005	2.006	2.007	2.008	2.009
Certificates	2.381	1.783	1.641	1.729	1.944	2.447	2.656
Technical Direction	9.674	10.051	9.767	9.746	8.137	6.103	4.381
Research	1.056	1.192	1.211	1.262	1.388	1.367	1.337
Inspection and facilities checking	3.536	1.469	1.141	286	123	100	83
ITE (Building Technical Inspection)	2.495	2.028	2.499	2.911	2.783	3.418	2.039
Assembly, Revision and Technical Direction of tubular scaffolding	0	1.948	1.918	2.715	3.214	3.262	3.387
Plans and Security Studies	5.566	6.513	6.767	6.846	6.772	4.968	3.920
Proyects	3.888	4.396	4.992	5.071	5.060	4.087	3.817

Also, until 2009 the rest of the professional activities were held on the same line, as they were works not directly related to the construction of housing or non-residential building. Optional management have been significantly reduced by 77% over the average of the years 2003 to 2007, but another concerning data in this figure is that the activity not directly related to the residential building, which had remained constant in the last 10 years, falls more than 50%. This is clearly due to the economic situation in Spain.

FIGURE 2. Madrid “technical architect” profession evolution (II)



	Certificates	Technical Direction	Research	ITE	Assembly,	Plans and Security Studies	Proyects
june-10	1.182	2.326	726	1.745	1.684	1.982	2.235
june-09	1.364	2.481	732	1.027	1.823	2.073	2.253

In summary, the objective of this research focuses on analyzing the expert opinion and the perception of the "technical architects" in Madrid about the reasons for the real estate crisis, its macroeconomic effects and the government policies implemented. Finally, it aims to suggest a set of interesting recommendations for economic recovery of the sector analyzed, which could accelerate the improvement from the current crisis situation.

MATERIAL AND METHODS

Cea D'Ancona (2001) defines the survey as a research strategy based on verbal statements of a particular population. Also, García Ferrando (1992) states that a survey is a research technique developed on a persons sample representative of a wider group which includes standard interrogation procedures, in order to obtain quantitative measurements of a wide range of objective and subjective characteristics of the analyzed population.

Thus, in this research, the precision required for quantitative results leads to work on a representative sample of the population of "Technical Architects", which will provide

quantitative measurable data, in some way connected with the building sector. The instrument selected will be the personal and telephone surveys, which require less time to design, delivery, tracking and obtaining information and data processing.

Following the categorization of the types of questions that make up a questionnaire proposed by Azofra (1999), we selected for our research, mostly a combination of single response questions, open questions, semi-closed and dichotomous questions. Thus, the questionnaire is distributed to a limited number of technical architects directly related to the construction sector. This way the sector's expectations and projections can be analyzed from a more objective and real point of view. This questionnaire consists of 25 questions related to the construction industry, particularly the building, the current economic situation and the sector forecasts. It has the following items and number of questions in each block:

	Specific objectives (indicators)	Number of questions
1.	**Block 1.** Type of population	4
2.	**Block 2.** Economic Situation	8
3.	**Block 3.** Building situation	8
4.	**Block 4**. Professional situation	5
	TOTAL Questions →	**25**

The purpose of this research is to know the opinion about the building sector and the Spanish economy at present, the future of housing, what kind of typologies will perform better, the possibility of changing the way of working, the willingness to work outside the current place of residence or even in a foreign country, and the future of the professional work. The sampling is simple random type, due to its simplicity. Also it is a single-stage sampling (the sample elements are chosen directly in only one step) and the different units in the sample are equally likely to be part of the sample. The questionnaire is completely anonymous.

Under the information provided by the Association of Technical Architects and Building Engineers in Madrid, the number of Technical Architects in Madrid is about 10,000. As can be understood, to distribute the questionnaires to the entire population is not feasible. On the other hand, the costs and duration for such a survey would be very high, hence a more reasonable sample has been selected, which has represented the population (Dillman, 2000). Thus, the reference population and source of data is taken from 100 surveys

distributed as follows based on current or past occupation of the respondent.

- Independent Professional surveys
- Surveys to employees of Promoting/Construction Companies
- Surveys to employees of state, local and regional governments
- Surveys with other types of activity

The respondents were previously informed by telephone or personally about the purpose of the research, requesting their cooperation in conducting the survey. Also, they were assured complete confidentiality of their answers. Thus, 100 surveys were distributed to people who were active in the profession of "Technical Architect" throughout the months of May, June and July 2010 in the mornings in the entrance of the Association of Technical Architects of Madrid, and in the afternoons at the School of Construction. The questionnaire was designed by experts in the field. The data were analyzed after being reviewed, tabulated and treated, using Excel and the computer program STATGRAPHICS 5.1.

RESULTS

The most remarkable opinions of the "technical architects" in Madrid are summarized in the following:

- 53% of their professional work is related to construction and real estate companies.
- 83% believe the economic situation in Spain is bad, 90% believe that the building sector is in a bad or very bad situation.
- 37% consider that the economic situation has a high relationship with the housing crisis.
- 36% believe that the non-residential building may ease the situation of the sector against 25% who think it would be the rehabilitation the area to play this role.
- 80% believe that the elimination of visas would not reduce the price of professional services.
- 76% believe the public companies related to housing (EMV, IVIMA, etc.) are helpful
- 68% considered that the fall in unemployment in June is not a sign of recovery and that it will come up again after the summer.

- 39% considered that home prices must fall further, while 32% think it is a difficult time to buy a house even if prices fell.
- 64% has considered geographical mobility in the last year to find work. 45% would be willing to functional mobility.
- More than 70% are dedicated to residential building and rehabilitation work (ITE, scaffolds, reports, various works).
- Less than 10% considere that their projects do not reach a level considered as sustainable building, and only 30% believe that an optimal level is reached in other types of non-residential building.

DISCUSION

One of the measures taken by the Spanish government is the elimination of tax deductions for home purchases from January 1, 2011. This suppression was largely demanded in the expansion stage, as it generated a distortion factor, encouraging demand for house purchase (García-Montalvo, 2006; Carpenter et al., 2008). Moreover, it would be necessary a package of measures that equate taxation between renting and buying. These economic policy measures could rebalance both markets (Ayuso et al, 2003). The rental market is a key element for the absorption of the stock of unsold new homes. It is a verifiable fact the little renting culture that exists in Spain, as 85% decide to buy the house, making it necessary that the housing rent increases to reach similar rates to the rest of Europe, in some cases higher than 50% (Ayuso et al, 2006).

Until recently, everyone decided the purchase with mortgages of twenty, thirty or even forty years. It has been an economic and sociological process that is now facing runaway prices, restriction of credit by banks and saving banks, rising unemployment, weak immigration and general crisis. In this situation, it can be important to recover the benefits of renting, with initiatives such as the approval of Law 19/2009 of November 23- measures of development and procedural streamlining of renting and energy efficiency of buildings (BOE 283 of 24.11.2009), which establishes express eviction.

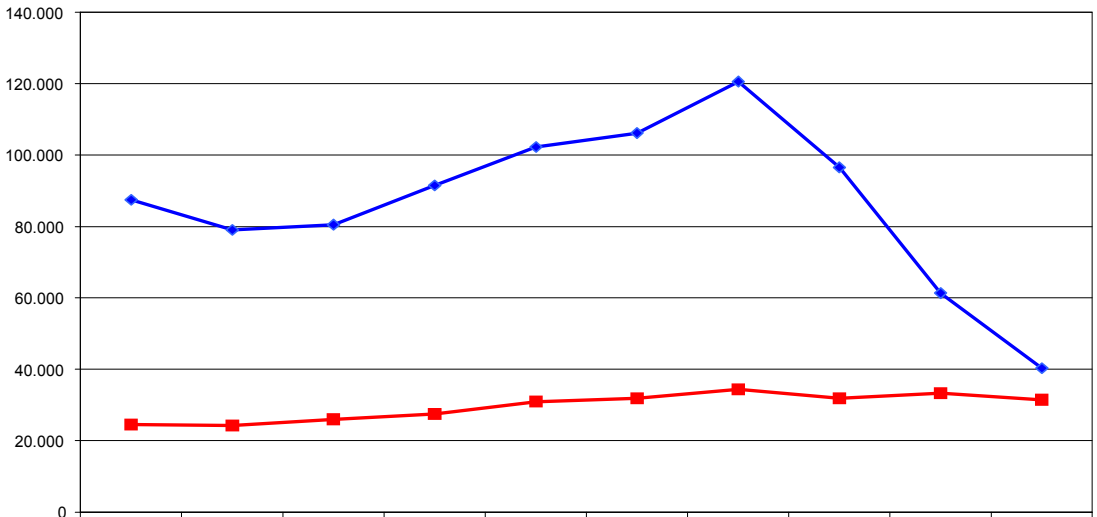
Also, the drop in the number of homes built and sold, and the housing stock accumulated after the boom years of construction (García-Montalvo, 2006) requires a change in the pattern of the promoter. The residential housing sector will have to adapt to the new economic situation, social rent housing, as much of the current housing is not intended for

this profile. The new 19/2009 Law is a short one with only three articles, the first two articles are dedicated to measures of development and procedural streamlining on urban renting, with major changes that make more relevant to have empty or rented houses. The third article of this law is about energy and water efficiency of buildings.

Moreover, according to the Bank of Spain it is important to achieve a price reduction in housing prices. If not, the construction sector will not start new promotions and business projects. It is considered necessary to cut approximately 20% in housing residence, 40% in non-habitual residence housing, 30% in non-residential housing and a 50% reduction in land value. In addition, the drop in interest rates of the ECB, help to increase the disposable income of households. In this environment, the effort to access to housing is reduced, and this, together with the reduction in prices of housing, improves accessibility and accelerates the absorption of the too high offer of homes (Balmaseda et al., 2002). In Spain, the drop in mortgage rates may be the main factor that contributes to improving housing affordability (García-Montalvo, 2006). However, the transformation of potential demand into effective purchases remains uncertain, especially in the short term.

Moreover, rehabilitation is a key to reactivate the construction industry and ancillary industries, create jobs and advance a more sustainable urban model, as given the historical evolution and the comparison of the new construction and rehabilitation curves it can be appreciated that the latter is less sensitive to this housing crisis. Among the measures taken is the reduction in income tax by works on house made before December 31, 2012. The law of sustainable economy expects 350,000 jobs related to rehabilitation to be generated. The goal is rehabilitation to reach 35% of total construction activity in 2020, based on the State Housing and Rehabilitation Plan 2009-2012 (Royal Decree 2066/2008).

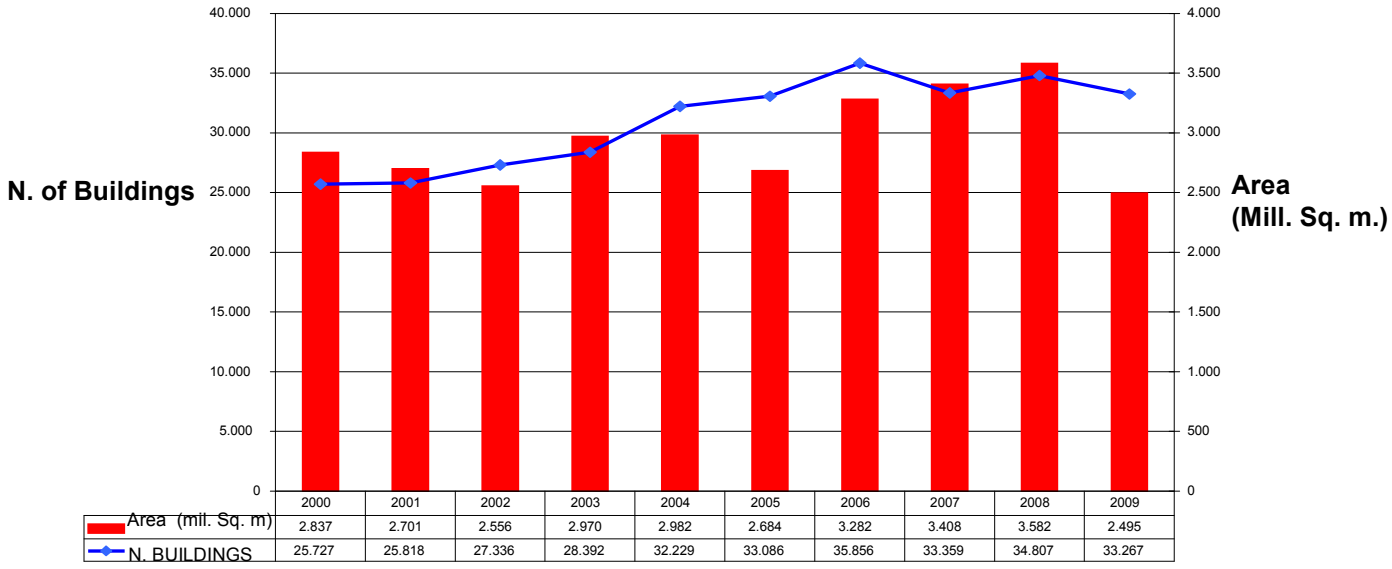
FIGURE 3. Number of licences depending of the type of work.



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
NEW BUILDINGS	87.518	79.087	80.533	91.526	102.333	106.208	120.664	96.626	61.396	40.347
REHABILITATION	24.572	24.295	26.037	27.493	30.961	31.934	34.431	31.905	33.357	31.506

The rehabilitation of buildings is drawing a very mild "v" in Spain. The level of production is less than expected and than the government forecasts. The indicator in V, corresponds to a rise in visas for rehabilitation, which had an increase of 9%. This figure is significant at a time when housing construction certifications fall more than 70%.

FIGURE 4. Number of licences in rehabilitation works



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Area (mil. Sq. m)	2.837	2.701	2.556	2.970	2.982	2.684	3.282	3.408	3.582	2.495
N. BUILDINGS	25.727	25.818	27.336	28.392	32.229	33.086	35.856	33.359	34.807	33.267

Moreover, the Congress of Deputies in April 2010 upheld the fiscal stimulus initiatives directed to the housing rehabilitation sector that were included in the Royal Decree Law 6/2010 of April 9, Measures to Promote Economic Recovery and Employment. Also, the Madrid Community presented the Plan "Rehabilitate", included in the Housing Plan 2009-2012. This measure aims to reinforce its commitment to the rehabilitation of housing and urban environments in the region with the launch of the new rehabilitation plan.

Through "Rehabilitate 2009-2012", the Madrid Community will facilitate intervention in a total of 186,000 homes. Of these, 126,500 will be included in 33 urban areas and other 24,000 will be rehabilitated individually (Rehabilitation Isolated or scattered). In addition, 35,500 more homes will benefit from aids for the installation of elevators and for sustainable rehabilitation (closures, alternative energy, etc.) covering 25% of the cost of the work, with a maximum of 9,000 euro per household and being incompatible with other state aids.

Aids will also be dedicated to improving non sustainable elements (foundations, roofs, etc.). In these cases, the subsidies cover up to 10% of the work with a maximum of 4,500 euro per household and are compatible with other aids. The subsidy of 70% of the work for installation of new elevators in homes, existing for more than 15 years, is also maintained, with a maximum of 50,000 euros per property. Thus, the new rule will make all existing buildings when sold or rented, have a certificate of energy efficiency. The commitment to rehabilitation as a tool to improve the energy efficiency of homes and buildings is the main contribution to the new model of sustainability.

It is imperative to act on the buildings in order to reduce the emissions of the sector, as a proper rehabilitation could achieve reductions in CO2 emissions of between 10 % and 30% and energy savings of between 5% and 20%, according to the data of the Ministry of Housing. This Ministry has awarded 2,000 million euro to rehabilitation programs within the PEVR (State Plan for housing and rehabilitation) from 2009 to 2012.

For the building sector to get a low emissions economy model, a large-scale conversion of buildings to low-consumption models is required. However, to exploit this type of sustainable construction, it is necessary a change of model building. First, new forms of financing would be required, in order to overcome the delay in the effective implementation of the legislation. Investment incentives, such as the increase of edification index based on

energy efficiency, would also be positive for the sector.

Finally, a measure to facilitate the sale of the housing stock is to reconvert them into subsidized housing. The latest housing plan of the Madrid local government includes this possibility (CAM Housing Plan 2009-2012). In addition, it is necessary to promote efficient social housing. Thus, for those developers of subsidized housing that exceed the standards of energy efficiency means required by the CTE, the grants will increase by 75% reaching € 3,500 per housing (Royal Decree 2066 / 2008).

CONCLUSIONS

In summary, this research shows that, in the Spanish case, it is necessary to develop and implement policies aimed at creation and generation of stable employment in the building sector, taking into account the expectations based on the State Housing and Rehabilitation Plan 2009-2012, the new taxation for rehabilitation and the energy saving plan in homes and buildings. Temporary and partial plans as the “E Plan” have to be avoided. The measures to be taken should be directed to provide citizens´ access to housing, promote rehabilitation and rental to offset the negative effects of the great housing stock that as of December 2009 was 994,966 units, encourage public housing for rent, decrease rate of taxation of rental income and enhance the offer of rental accommodation for students, professors, researchers and other members of the university community. This latter is mentioned on the “International Excellence Campus Program”, which seeks to improve the quality of Spanish universities.

The confidence levels in the real estate and housing sector do not improve, while access conditions to credit have tightened. The economic downturn makes investment decisions, such as housing investment, to be postponed for the long term. The current debt levels of families make not feasible the home purchase.

Moreover, Spain has to comply with new European regulations set by 2020, requiring all new buildings to be highly efficient, use renewable energy and tend to zero consumption. Public buildings must meet these requirements in two years. Spain should promote the construction of efficient buildings in terms of energy, a formula already widespread in other European countries like Austria. They are called "passive houses", buildings that do not require provision of electricity, as natural elements are used to take advantage of air-

conditioned and they have renewable generation systems for electricity. Europe is well advanced in its implementation. In the case of Spain, the University must play a key role in the development and implementation of sustainable real estate proposals. Training in this line should be a pillar in the new curriculum, as social consciousness is needed, leading to the buyers to demand a sustainable house.

It is also necessary to develop awareness and information campaigns to citizens about energy saving. Sold or rented buildings should have a certificate to classify the building from A to G, depending on its level of energy efficiency. The deadline for this is set for 2020, but should be a measure to undertake immediately, as it would create jobs immediately.

The first energy certificates should be made between 2011 and 2013, depending on the type of real estate asset. The energy efficiency of a building is affected by all types of conditions: volume and proportions, design and type of walls, materials, ventilation systems, lighting, air conditioning. Eventually, all these conditions will affect the image of our buildings, cities and landscapes. This new concept involves a great opportunity for engineering and architecture compatibility.

In short, a great opportunity to build in a more sustainable way during the boom was missed. Perhaps because it was not convenient for the developers, the million homes that were built then are energy inefficient. There is in Spain 25 million residential buildings, half over 30 years old and 6 million over 50 years. This figures that lead to a low energy efficiency and a low level of respect for the environment, would justify their rehabilitation with environmental criteria. Transform older homes in sustainable homes opens a new field of activity for the technicians and for the construction companies.

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